



SEQUENCE LISTING

<110> ROMOND, Pierre-Charles
<110> RENAUD, Michel
<110> ALRIC, Monique
<110> MEINIEL, Olivier
<110> BALLUT, Lionel
<120> METHOD FOR DETECTING MICRO-ORGANISMS
<130> 344 292 - US
<150> PCT/FR 01/02 371
<151> 2001-07-20

<150> FR 00/09 600
<151> 2000-07-21

<150> FR 00/12 524
<151> 2000-10-02

<160> 189

<170> PatentIn Ver. 2.1

<210> 1
<211> 26
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence: Primer
for detecting the amplification of the intergenic
region of the rpoBC operon of micro-organisms

<220>
<221> misc_feature
<222> (3)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (12)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (15)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (18)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (21)
<223> n = a, g, c or t

<400> 1
ggngayaary tngcnggnag ncaygg

26

<210> 2
<211> 26
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence: Primer
for detecting the amplification of the intergenic
region of the rpoBC operon of micro-organisms

<220>
<221> misc_feature
<222> (3)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (12)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (15)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (18)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (21)
<223> n = a, g, c or t

<400> 2
ggngayaary tngcnggncg ncaygg

26

<210> 3
<211> 26
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence: Primer
for detecting the amplification of the intergenic
region of the rpoBC operon of micro-organisms

<220>
<221> misc_feature
<222> (3)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (12)
<223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (15)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<400> 3
 ggngayaary tngcnaayag ncaygg

26

<210> 4
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer
 for detecting the amplification of the intergenic
 region of the rpoBC operon of micro-organisms

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (15)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<400> 4
 ggngayaary tngcnaaycg ncaygg

26

<210> 5
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer
 for detecting the amplification of the intergenic
 region of the rpoBC operon of micro-organisms

<220>
 <221> misc_feature
 <222> (3)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (15)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (18)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (21)

<223> n = a, g, c or t

<400> 5

ggngayaara tggcnggnmg ncaygg

26

<210> 6

<211> 26

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence: Primer
for detecting the amplification of the intergenic
region of the rpoBC operon of micro-organisms

<220>

<221> misc_feature

<222> (3)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (15)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (18)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (21)

<223> n = a, g, c or t

<400> 6

ggngayaart tygcntcnmg ncaygg

26

<210> 7

<211> 26

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence: Primer
for detecting the amplification of the intergenic

region of the rpoBC operon of micro-organisms

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (15)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<400> 7
 ggngayaart tygcnagymg ncaygg

26

<210> 8
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer
 for detecting the amplification of the intergenic
 region of the rpoBC operon of micro-organisms

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (15)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<400> 8
 ggngayaart tygcnacnmg ncaygg

26

<210> 9
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer
 for detecting the amplification of the intergenic

region of the rpoBC operon of micro-organisms

<220>
 <221> misc_feature
 <222> (6)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t

<400> 9
 aaygcngayt tygayggnga ycarat

26

<210> 10
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer
 for detecting the amplification of the intergenic
 region of the rpoBC operon of micro-organisms

<220>
 <221> misc_feature
 <222> (6)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t

<400> 10
 aaygcngayt tygayggnga ratggc

26

<210> 11
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer
 for detecting the amplification of the intergenic
 region of the rpoBC operon of micro-organisms

<220>
 <221> misc_feature
 <222> (6)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t

<400> 11
 aaygcngayt tygayggnga ygarat

26

<210> 12
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer
 for detecting the amplification of the intergenic
 region of the rpoBC operon of micro-organisms

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (6)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t

<400> 12
 ggnggncarm gnttyggnga ratgga

26

<210> 13
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer
 for detecting the amplification of the intergenic
 region of the rpoBC operon of micro-organisms

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (6)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (18)

<223> n = a, g, c or t

<400> 13

ggnggncayg gnttyggnga ratgga

26

<210> 14

<211> 26

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence: Primer
for detecting the amplification of the intergenic
region of the rpoBC operon of micro-organisms

<220>

<221> misc_feature

<222> (3)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (6)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (12)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (18)

<223> n = a, g, c or t

<400> 14

ggnggncarw snttyggnga ratgga

26

<210> 15

<211> 26

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence: Primer
for detecting the amplification of the intergenic
region of the rpoBC operon of micro-organisms

<220>

<221> misc_feature

<222> (3)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (6) .. (7)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (9)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (12)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (18)

<223> n = a, g, c or t

<400> 15

ggnggnntnm gnttyggnga ratgga

26

<210> 16

<211> 26

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence: Primer
for detecting the amplification of the intergenic
region of the rpoBC operon of micro-organisms

<220>

<221> misc_feature

<222> (3)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (9)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (12)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (21)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (24)

<223> n = a, g, c or t

<400> 16

ggnaarcgng tngaytaytc nggnmg

26

<210> 17

<211> 26

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence: Primer

for detecting the amplification of the intergenic
region of the rpoBC operon of micro-organisms

<220>
<221> misc_feature
<222> (3)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (9)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (12)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (21)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (24)
<223> n = a, g, c or t

<400> 17
ggnaarcgng tngaytayag nggnmg

26

<210> 18
<211> 26
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence: Primer
for detecting the amplification of the intergenic
region of the rpoBC operon of micro-organisms

<220>
<221> misc_feature
<222> (3)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (9)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (12)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (21)
<223> n = a, g, c or t

<220>

<221> misc_feature
 <222> (24)
 <223> n = a, g, c or t

<400> 18
 ggnaaragng tngaytaytc nggnmg

26

<210> 19
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer
 for detecting the amplification of the intergenic
 region of the rpoBC operon of micro-organisms

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (9)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (24)
 <223> n = a, g, c or t

<400> 19
 ggnaaragng tngaytayag nggnmg

26

<210> 20
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer
 for detecting the amplification of the intergenic
 region of the rpoBC operon of micro-organisms

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>

<221> misc_feature
 <222> (9)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (24)
 <223> n = a, g, c or t

<400> 20
 ggnaarcgng gngaytaytc ngtnmg

26

<210> 21
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer
 for detecting the amplification of the intergenic
 region of the rpoBC operon of micro-organisms

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (9)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (24)
 <223> n = a, g, c or t

<400> 21
 ggnaarcgng gngaytayag ngtnmg

26

<210> 22

<211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer
 for detecting the amplification of the intergenic
 region of the rpoBC operon of micro-organisms

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (9)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (24)
 <223> n = a, g, c or t

<400> 22
 ggnaaragng gngaytaytc ngtnmg

26

<210> 23
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer
 for detecting the amplification of the intergenic
 region of the rpoBC operon of micro-organisms

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (9)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (24)
 <223> n = a, g, c or t

<400> 23
 ggnaaragng gngaytayag ngtnmg

26

<210> 24
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer
 for detecting the amplification of the intergenic
 region of the rpoBC operon of micro-organisms

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (9)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (24)
 <223> n = a, g, c or t

<400> 24
 ggnaarcgng tngayttytc nggnmg

26

<210> 25
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer
 for detecting the amplification of the intergenic
 region of the rpoBC operon of micro-organisms

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (9)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (24)
 <223> n = a, g, c or t

<400> 25
 ggnaarcgng tngayttyag nggnmg

26

<210> 26
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer
 for detecting the amplification of the intergenic
 region of the rpoBC operon of micro-organisms

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (9)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (24)
 <223> n = a, g, c or t

<400> 26
ggnaaragng tngayttytc nggnmg

26

<210> 27
<211> 26
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence: Primer
for detecting the amplification of the intergenic
region of the rpoBC operon of micro-organisms

<220>
<221> misc_feature
<222> (3)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (9)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (12)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (21)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (24)
<223> n = a, g, c or t

<400> 27
ggnaaragng tngayttyag nggnmg

26

<210> 28
<211> 26
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence: Primer
for detecting the amplification of the intergenic
region of the rpoBC operon of micro-organisms

<220>
<221> misc_feature
<222> (3)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (9)
<223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (24)
 <223> n = a, g, c or t

<400> 28
 ggnaarcgng tngayttytc ngcnmg

26

<210> 29
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer
 for detecting the amplification of the intergenic
 region of the rpoBC operon of micro-organisms

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (9)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (24)
 <223> n = a, g, c or t

<400> 29
 ggnaarcgng tngayttyag ngcnmg

26

<210> 30
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer
 for detecting the amplification of the intergenic
 region of the rpoBC operon of micro-organisms

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (9)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (24)
 <223> n = a, g, c or t

<400> 30
 ggnaaragng tngayttytc ngcnmg

26

<210> 31
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer
 for detecting the amplification of the intergenic
 region of the rpoBC operon of micro-organisms

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (9)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (24)

<223> n = a, g, c or t

<400> 31

ggnaaragng tngayttyag ngcnmg

26

<210> 32

<211> 26

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence: Primer
corresponding to a proteinic motive of HSP10
from Escherichia Coli.

<220>

<221> misc_feature

<222> (15)

<223> n = a, g, c or t

<400> 32

ctggaygtka arrtnggyga yatygt

26

<210> 33

<211> 26

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence: Primer
corresponding to a proteinic motive of HSP10
from Escherichia Coli.

<220>

<221> misc_feature

<222> (2)..(3)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (6)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (9)

<223> n = a, g, c or t

<400> 33

annacngtn gcrgrgtggt rccgtc

26

<210> 34

<211> 26

<212> DNA

<213> Artificial sequence

<220>
 <223> Description of artificial sequence: Consensus
 Primer (UNI-ADEG 1)

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (9)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (15)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (24)..(25)
 <223> n = a, g, c or t

<400> 34
 ggngayggna cnacnacngc nacnnt

26

<210> 35
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Consensus
 Primer (UNI-ADEG 2)

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (9)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (15)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (24)..(25)
 <223> n = a, g, c or t

<400> 35
 ggngayggna cnacnacntg ntcnnt

26

<210> 36
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Consensus sequence
 for detecting enterobacteria (ENT-BNEW).

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (24)
 <223> n = a, g, c or t

<400> 36
 aanmttcgtc cnytrcanga ycgngt

26

<210> 37
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Consensus sequence
 for detecting clostridia (CLO-BNEW2)

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<400> 37
 atnarrccay twggwgaymg ngwtgt

26

<210> 38
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Consensus sequence
 for detecting bifidobacteria (BIF-BNEW).

<220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<400> 38
 aarccrctcg aggacmrnrt nstsgt

26

<210> 39
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Consensus sequence
 for detecting Lactococcus (UNI-A3).

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>

<221> misc_feature
 <222> (9)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (15)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (24)..(25)
 <223> n = a, g, c or t

<400> 39
 ggngayggna cnaanacngc nacnnt

26

<210> 40
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Consensus sequence
 for detecting Bifidobacterium and Mycobacterium (BIF-BNEW2).

<220>
 <221> misc_feature
 <222> (9)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (24)
 <223> n = a, g, c or t

<400> 40
 atcaagccnc tmgrrgacmr srtnt

26

<210> 41
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>

<223> Description of artificial sequence: Consensus sequence
for detecting Helicobacter (HEL-BNEW).

<220>

<221> misc_feature

<222> (1)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (3)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (6)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (9)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (12)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (15)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (18)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (21)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (24)

<223> n = a, g, c or t

<400> 41

ntncancnt tnggnganag ngtnntt

26

<210> 42

<211> 26

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence: Consensus sequence
for detecting Campylobacter (CAM-BNEW).

<220>

<221> misc_feature

<222> (1)
 <223> n = a, g, c or t

 <220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

 <220>
 <221> misc_feature
 <222> (6)
 <223> n = a, g, c or t

 <220>
 <221> misc_feature
 <222> (9)
 <223> n = a, g, c or t

 <220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

 <220>
 <221> misc_feature
 <222> (15)
 <223> n = a, g, c or t

 <220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t

 <220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

 <220>
 <221> misc_feature
 <222> (24)
 <223> n = a, g, c or t

 <400> 42
 ntncancnt tnggnaancg ngtnct

26

<210> 43
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Consensus sequence
 for detecting bacteroids (BACT-BNEW).

<220>
 <221> misc_feature
 <222> (1)
 <223> n = a, g, c or t

<220>
 <221> misc_feature

<222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (6)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (9)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (15)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (24)
 <223> n = a, g, c or t

<400> 43
 ntnaancnt tngcngancg ngtnct

26

<210> 44
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Consensus sequence
 for detecting Chlamydia (CHLA-BNEW).

<220>
 <221> misc_feature
 <222> (1)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (6)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (9)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (12)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (15)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (18)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (21)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (24)

<223> n = a, g, c or t

<400> 44

ntnaancnt tngngganag natntt

26

<210> 45

<211> 26

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence: Consensus sequence
for detecting Mycoplasma (MYCP-BNEW).

<220>

<221> misc_feature

<222> (1)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (3)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (9)..(10)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (12)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (15)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (18)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (21)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (24)

<223> n = a, g, c or t

<400> 45

ntnaaacnn tnggnaancg ngtnat

26

<210> 46

<211> 26

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence: Consensus sequence
for detecting Staphylococcus (STA-BNEW).

<220>

<221> misc_feature

<222> (1)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (3)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (9)..(10)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (12)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (15)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (18)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (21)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (24)

<223> n = a, g, c or t

<400> 46

ntnaaacnn tnggnaancg ngtnat

26

<210> 47

<211> 26

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence: Consensus sequence
for detecting Lactococcus and Streptococcus (LACC-BNEW).

<220>

<221> misc_feature

<222> (9)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (14)

<223> n = a, g, c or t

<400> 47

ttgaaacct tagnggraycg ygtrst

26

<210> 48

<211> 26

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence: Consensus sequence
for detecting Lactobacillus and Bacillus (LACB-BNEW).

<220>

<221> misc_feature

<222> (15)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (21)

<223> n = a, g, c or t

<220>

<221> misc_feature

<222> (24)

<223> n = a, g, c or t

<400> 48
ttamarccaw tmggngatcg ngtnrt

26

<210> 49
<211> 26
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence: Consensus sequence
for detecting Clostridium (CLO-BNEW3).

<220>
<221> misc_feature
<222> (3)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (5)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (10)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (12)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (15)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (21)
<223> n = a, g, c or t

<220>
<221> misc_feature
<222> (24)
<223> n = a, g, c or t

<400> 49
atnanaccan tnggngacag ngtngt

26

<210> 50
<211> 26
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence: Consensus sequence
for detecting Enterobacteriaceae, Pasteurella, Haemophilus
(ENT-BNEW2).

<220>

<221> misc_feature
 <222> (1)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (6)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (9)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (15)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (24)
 <223> n = a, g, c or t

<400> 50
 ntncgncnt tncangancg ngtnat

26

<210> 51
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Consensus sequence
 for detecting Neisseria, Legionella (LEG-BNEW).

<220>
 <221> misc_feature
 <222> (1)
 <223> n = a, g, c or t

<220>

<221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (6)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (9)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (15)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (24)
 <223> n = a, g, c or t

<400> 51
 ntncgncnt tncangancg ngtngt

26

<210> 52
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Consensus sequence
 for detecting Aeromonas and Bordetella (AER-BNEW).

<220>
 <221> misc_feature
 <222> (1)
 <223> n = a, g, c or t

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t

<220>

<221> misc_feature
 <222> (6)
 <223> n = a, g, c or t

 <220>
 <221> misc_feature
 <222> (9)
 <223> n = a, g, c or t

 <220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t

 <220>
 <221> misc_feature
 <222> (15)
 <223> n = a, g, c or t

 <220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t

 <220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t

 <220>
 <221> misc_feature
 <222> (24)
 <223> n = a, g, c or t

 <400> 52
 ntncgncnc tncangancg ngtnat

26

<210> 53
 <211> 26
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> Description of artificial sequence: Primer

 <220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t/u

 <220>
 <221> misc_feature
 <222> (6)
 <223> n = a, g, c or t/u

 <220>
 <221> misc_feature
 <222> (9)..(10)
 <223> n = a, g, c or t/u

 <220>
 <221> misc_feature

<222> (12)
 <223> n = a, g, c or t/u

<220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t/u

<400> 53
 ggnggncann snttyggnga ratgga

26

<210> 54
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer

<220>
 <221> misc_feature
 <222> (6)
 <223> n = a, g, c or t/u

<220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t/u

<400> 54
 aaygcngayt tygayggnga ysarat

26

<210> 55
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Primer

<220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t/u

<220>
 <221> misc_feature
 <222> (6)
 <223> n = a, g, c or t/u

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t/u

<220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t/u

<400> 55

ggnggncarm gnttyggnga ratgga

26

<210> 56
 <211> 26
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> Description of artificial sequence: Primer

 <220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t/u

 <220>
 <221> misc_feature
 <222> (6)
 <223> n = a, g, c or t/u

 <220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t/u

 <220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t/u

 <400> 56
 ggnggncayg gnttyggnga ratgga

26

<210> 57
 <211> 26
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> Description of artificial sequence: Primer

 <220>
 <221> misc_feature
 <222> (3)
 <223> n = a, g, c or t/u

 <220>
 <221> misc_feature
 <222> (6)
 <223> n = a, g, c or t/u

 <220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t/u

 <220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t/u

<400> 57
ggnggncarw snttyggnga ratgga

26

<210> 58
<211> 26
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence: Primer

<220>
<221> misc_feature
<222> (3)
<223> n = a, g, c or t/u

<220>
<221> misc_feature
<222> (6)..(7)
<223> n = a, g, c or t/u

<220>
<221> misc_feature
<222> (9)
<223> n = a, g, c or t/u

<220>
<221> misc_feature
<222> (12)
<223> n = a, g, c or t/u

<220>
<221> misc_feature
<222> (18)
<223> n = a, g, c or t/u

<400> 58
ggnggnntnm gnttyggnga ratgga

26

<210> 59
<211> 26
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence: Primer

<220>
<221> misc_feature
<222> (6)
<223> n = a, g, c or t/u

<220>
<221> misc_feature
<222> (18)
<223> n = a, g, c or t/u

<400> 59
aaygcngayt tygayggnga ycarat

26

<210> 60
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer

<220>
 <221> misc_feature
 <222> (6)
 <223> n = a, g, c or t/u

<220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t/u

<400> 60
 aaygcngayt tygayggnga ratggc

26

<210> 61
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer

<220>
 <221> misc_feature
 <222> (6)
 <223> n = a, g, c or t/u

<220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t/u

<400> 61
 aaygcngayt tygayggnga ygarat

26

<210> 62
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Description of artificial sequence: Primer

<220>
 <221> misc_feature
 <222> (9)
 <223> n = a, g, c or t/u

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t/u

<400> 62

atytsrtcnc crtcraartc ngcrtt

26

<210> 63

<211> 333

<212> DNA

<213> *Lactobacillus reuteri*

<400> 63

cttggttaagg	aattacaagc	attaggtctt	gatatgaagg	ttcttgatgg	taacaacaag	60
gaaattcagt	taaagaacat	ggacgaagat	gatgatgaag	ttgtaaatgt	tgatgcatta	120
gctaaatatg	cagaagaaca	taaaacagac	gataagaaga	acgaagaaga	aaacaagtct	180
gaagcaactt	caacaactac	cgatgacaaa	actaatcaaa	attaatat	agggttgctac	240
ggtttactga	aagaaggagg	aacatccttt	gattgatgtc	aataaatttg	aaagtatgca	300
gatcgggtctg	gcattctccag	ataagatccg	tag			333

<210> 64

<211> 338

<212> DNA

<213> *Bacillus subtilis*

<400> 64

cttggttaagg	aacttcaatc	attaggtttg	gatattcgtg	ttcttgatat	gaatcataat	60
gaaattgaac	ttcgtgatat	ggatgaagat	tcaagtgaac	acttaaacat	tgattcattg	120
tcacgtatgg	cagaagaaca	agaaaagaag	aagttagccg	aagaaactgg	aaaatcagaa	180
gataagaaag	aaaacaagaa	agatgcagat	aagctagtag	ctcctgcaga	tgaatctgac	240
gacgaagttt	ctaaatagta	ggagggttaa	cttttgatcg	acgtaaataa	atttgaaagt	300
atgcaaattg	gtcttgcatc	acctaacaag	atcagaag			338

<210> 65

<211> 329

<212> DNA

<213> *Lactobacillus gasei*

<400> 65

cttggttaagg	aacttcaatc	cttaggtttg	gatattaaag	tcttagatat	ggaccacaag	60
gaaattgaat	tacgtgacat	ggatgatgat	tctaattgatc	acttcaacat	tgacacttta	120
tctaagcttg	ctgaacaaca	agaaaagaag	aagttagccg	aagaagctgc	aaagaaagat	180
gataagtcag	ccgaacctgt	agatcagagt	gattcttcaa	cttcatctga	tgataagggt	240
tctaagtaat	aggagggttaa	acttttgatc	gacgtaaata	agtttgaaag	tatgcaaatt	300
ggtttggtct	ctccaaacaa	gatcagaag				329

<210> 66

<211> 296

<212> DNA

<213> *Lactobacillus paracasei*

<400> 66

cttgtcaaag	aattgcaagc	actgggtctg	gatatgaagg	tccttggcgc	ggataaaaaa	60
gaaattgaac	tgcgggacat	ggacgacgac	gaggatgata	ttgtttctgt	cgatgccttg	120
gcgaagtttg	ctgctcagca	ggaagaaaag	aaggctcacg	aagccgcagc	acaagcaact	180
gacggtaagt	ctgccaacag	taccgacgat	aagaaatagg	aggttagccc	tttgattgat	240
gtcaataagt	ttgaaagtat	gcaaatacggc	ttagcctcgc	cagataaaat	ccgtag	296

<210> 67

<211> 386

<212> DNA

<213> *Lactococcus lactis*

<400> 67

ttgggttaaag	agttacaatc	acttgggtctt	gatatgaaag	tccttgatgc	tgaccgtaat	60
gttcttgact	tacgtgaatt	ggatgaagat	gaagtaatga	ctcgtccaga	taatacagaa	120
attactcctg	aaatgcttga	agcacaggaa	gctattgttg	cacaagcaga	agctgaagaa	180
gaagctttga	ttaacgctga	tactgaaaaa	taagattttg	taattaatat	tttgagatag	240
atttactgac	aaaaatttct	gtcagtaa	ctctaattctc	ataatcgtct	agcgttaa	300
ttattagaag	tggagaaaga	attggttgat	gtaaataaat	ttgagagtat	gcgtattggt	360
atcgcatctc	cacaaaaaat	tcgtta				386

<210> 68

<211> 344

<212> DNA

<213> *Streptococcus pyogenes*

<400> 68

cttgtaaaaag	aattgcaatc	gcttgggtctt	gatatgcgtg	tgcttgacga	ggatgataat	60
gaagtggaaac	ttcgtgatct	tgatgaaggt	gaagacgatg	acattatgca	tggtgacgat	120
ctcgagaagg	cacgtgaaaa	acaagctcaa	gaaactcaag	aagtttctga	aacaactgac	180
gaaaaataag	caatcaattc	ttattaaata	attatttact	ggctctggggc	aaaggcccca	240
ggaactggta	aagtcacaa	aggcagaaag	gtaaaactag	tggttgacgt	aaatcgtttt	300
aaaagtatgc	aaatcacatt	agcctcacca	agtaagggtcc	gttc		344

<210> 69

<211> 318

<212> DNA

<213> *Lactobacillus helveticus*

<400> 69

ttaatcaaaag	aacttcaaag	cttaggtatg	gatgtcaaaa	tcctttctgg	tgatgaagaa	60
gaaatagaaa	tgagagattt	agaagacgaa	gaagatgcga	aacaagctga	cggcctggca	120
ttatcaggtg	atgaagagcc	ggaagaaaca	gcattctgcag	acgttgaacg	cgatgtagta	180
acaaaagaat	aattctctagt	tataaaggca	agtgacatcg	gttaatccga	agataaaaag	240
ggaggttaggc	cccttgctag	atgtgaacaa	ttttgagtat	atgaacatcg	gtcttgcttc	300
accagataaa	atccgttc					318

<210> 70

<211> 318

<212> DNA

<213> *Bacillus subtilis*

<400> 70

ttaatcaaaag	aacttcaaag	cttaggtatg	gatgtcaaaa	tcctttctgg	tgatgaagaa	60
gaaatagaaa	tgagagattt	agaagacgaa	gaagatgcga	aacaagctga	cggcctggca	120
ttatcaggtg	atgaagagcc	ggaagaaaca	gcattctgcag	acgttgaacg	cgatgtagta	180
acaaaagaat	aattctctagt	tataaaggca	agtgacatcg	gttaatccga	agataaaaag	240
ggaggttaggc	cccttgctag	atgtgaacaa	ttttgagtat	atgaacatcg	gtcttgcttc	300
accagataaa	atccgttc					318

<210> 71

<211> 304

<212> DNA

<213> *Bacillus halodurans*

<400> 71

cttataaaaag	agctacagtc	tctcggtatg	gacgtcaaga	tgctatcaag	tactgaggaa	60
gagattgaaa	tgaaagagct	tgatgatgag	gatgaacaag	caagcgacaa	attgaacttg	120
aatattgatt	caacagaatc	aaatgtttta	tcagctgaaa	ggggagcagt	cccctttcac	180
ttgctcttta	aattcggttac	ctgcttttgg	acatggaaat	cataagggag	gttgccccct	240
tgatagacgt	aaacaatttt	gagtacatga	aaattgggtct	tgcttcacca	aataaaaattc	300
gttc						304

<210> 72
 <211> 363
 <212> DNA
 <213> *Staphylococcus aureus*

<400> 72
 ttgatgaaag aattacaaag tttaggttta gatgtaaaag ttatggatga gcaagataat 60
 gaaatcgaaa tgacagacgt tgatgacgat gatgttgtag aacgcaaagt agatttacaa 120
 caaaatgatg ctccctgaaac acaaaaagaa gttactgatt aatacgcaat ttacaaaaca 180
 ggcaaaaaga tactaagctg aatttttattg atgattcagt ttagtacttt aagccatttt 240
 aaataaatgc aaatcaatca aatagcacag ctaatctaaa ttgaaggagg taggctcctt 300
 gattgatgta aataattttcc attatatgaa aataggattg gcttcacctg aaaaaatccg 360
 ttc 363

<210> 73
 <211> 352
 <212> DNA
 <213> *Clostridium spiroforme*

<400> 73
 ttaaagaaag agttacaagc acttgcattg gatgtacgtt tgttagatga aaatgataat 60
 gaagttgata tgcgtaatat tgaagaagag gaacatcggt tcccgcgtag cattgataaa 120
 gatgaagtaa ttgaaactcc aaaaactgat gatgaagttt ccgaagaaat tactgaagat 180
 gatttaaatg tagaagaatg tgacgtatgt gaagaagata actttgagga caatgacttc 240
 gaagacaatg atattgaaga aagtgaatca ttataggagg aattacgatg gcaaatacaa 300
 ataaattctc agcgattcaa attggttttag cttcgcttca gaagattcgc ga 352

<210> 74
 <211> 358
 <212> DNA
 <213> *Clostridium leptum*

<400> 74
 ctcattaagg agcttcagtc cctgggcctg gatgtaaagg tgctggataa ggatgagcag 60
 gagatcgacc taaagcagaa ctttgacgac gatgacgata tcggcttgaa cgacggcggc 120
 accattctgg aggaggatga agtcatgacc tccatggatg gctacaccct ggaggacgat 180
 ccggacgata acaacatggt tgacgattcc ggcttttttg acgaagacgg agacgatcct 240
 ttggattttg attccattgc aagtgatatt cgtgaagaat aaggaggggc gataggatgg 300
 agttaaactg ttttgagtca attaaaatcg gactggcctc tccggataaa attcgaga 358

<210> 75
 <211> 376
 <212> DNA
 <213> *Clostridium nexile*

<400> 75
 ctccctgaaag aacttcagtc actgggactt gacgtgagag tattgcgtga agatcagaca 60
 gaagttgaga ttatggagac aatcgattac ggtgaaacag atttacattc aattattgaa 120
 ggagacagaa gatacaatcc tgagaatgaa tcttatggag aacatggttt cagtcagcag 180
 gaatttgcag gcgaggaact tgtggatgta gaggaagatg aatttgatga accggatgat 240
 atcgattttg acgatatggt agacgaagaa taggaggatt gccaataatg ccagtaacaa 300
 ataatgaacc agcataccag ccgatgactt ttgatgcgat caaaatcggt ttggcgctcac 360
 ctgaaaaaat cttgga 376

<210> 76
 <211> 391
 <212> DNA

<213> *Ruminococcus hydrogenotrophicus*

<400> 76

ctctttaaag	aaattcagtc	cctgggtctg	gacgtgagag	tcctcaacga	agaccagacc	60
gaggtggaga	tcattggagag	cgtggattac	ggtgatacag	atctgcactc	catcattgag	120
ggagatcgtc	atcgttcgca	ggatgagtcc	tacggagcaa	tgggatatac	gaagcaggaa	180
ttttccggtg	aagagctggg	agacatcgac	gagagtgaag	acgacagcga	agacgaagat	240
gaagatttga	ttgaattgga	agattctctt	gacagagaag	agtagaaagg	ggtaagaaac	300
aatggcgaga	aatgaacaac	aatgaaacct	atcagccaat	gactttcgat	gccatcaaaa	360
tcggactggc	gtccccctgag	aaaatcagag	a			391

<210> 77

<211> 182

<212> DNA

<213> *Chlamydia muridarum*

<400> 77

ttgattaaag	aaatgcaagg	tctagggctc	gatgttcgcc	ctatggtagt	agatgcttaa	60
aaaacacttg	ttggagataa	gttaatgttc	aaagaagggt	ctcgagacga	tgcagcccta	120
gcaaaagaag	ggttgtttga	taagttagaa	attgggattg	cttcagatgt	gactattcgc	180
ga						182

<210> 78

<211> 182

<212> DNA

<213> *Chlamydia trachomatis*

<400> 78

ttgattaaag	aaatgcaagg	tctagggctt	gatgttcgcc	ctatggtagt	agatgcttaa	60
aaaacacttg	ttggagagaa	gttaatgttc	agagaagggt	ctcgagacga	tgcagccctg	120
gtaaaagaag	ggctgtttga	taagttagaa	attgggattg	cttcagatgt	gactattcgc	180
ga						182

<210> 79

<211> 181

<212> DNA

<213> *Chlamydophila pneumoniae*

<400> 79

ctaattaaag	agatgcaggg	tctaggactt	gatgttcgtc	ctatggtcgt	agacgcttaa	60
aaaatgacgt	tttggagaaa	ataatgttcg	gagaaaattc	tcgagacatt	ggagttcttt	120
ctaaagaagg	actatttgat	aaattagaga	taggcatagc	ttcagatatt	acaattcgtg	180
a						181

<210> 80

<211> 181

<212> DNA

<213> *Chlamydophila pneumoniae*

<400> 80

ctaattaaag	agatgcaggg	tctaggactt	gatgttcgtc	ctatggtcgt	agacgcttaa	60
aaaatgacgt	tttggagaaa	ataatgttcg	gagaaaattc	tcgagacatt	ggagttcttt	120
ctaaagaagg	actatttgat	aaattagaga	taggcatagc	ttcagatatt	acaattcgtg	180
a						181

<210> 81

<211> 181

<212> DNA

<213> Chlamydophila pneumoniae

<400> 81

ctaattaaag	agatgcaggg	tctaggactt	gatgttcgtc	ctatggtcgt	agacgcttaa	60
aaaatgacgt	tttgagagaa	ataatgttcg	gagaaaattc	tcgagacatt	ggagttcttt	120
ctaaagaagg	actatttgat	aaattagaga	taggcatagc	ttcagatatt	acaattcgtg	180
a						181

<210> 82

<211> 225

<212> DNA

<213> Klebsiella pneumoniae

<400> 82

ttgttgaaag	agattcgttc	gctgggtatc	aacatcgaac	tggaagacga	gtaattctcg	60
ctcaaacagg	tcactgctgt	cgggttaaaa	cccggcagcg	gattgtgcta	actccgacgg	120
gagcaaattcc	gtgaaagatt	tattaaagtt	tctgaaagcg	cagactaaaa	ccgaagagtt	180
tgatgcgatc	aaaattgctc	tggttcgcc	agacatgatc	cgttc		225

<210> 83

<211> 225

<212> DNA

<213> Escherichia coli

<400> 83

ttgttgaaag	agattcgttc	gctgggtatc	aacatcgaac	tggaagacga	gtaattctcg	60
ctcaaacagg	tcactgctgt	cgggttaaaa	cccggcagcg	gattgtgcta	actccgacgg	120
gagcaaattcc	gtgaaagatt	tattaaagtt	tctgaaagcg	cagactaaaa	ccgaagagtt	180
tgatgcgatc	aaaattgctc	tggttcgcc	agacatgatc	cgttc		225

<210> 84

<211> 225

<212> DNA

<213> Escherichia coli

<400> 84

ttgttgaaag	agattcgttc	gctgggtatc	aacatcgaac	tggaagacga	gtaattctcg	60
ctcaaacagg	tcactgctgt	cgggttaaaa	cccggcagcg	gattgtgcta	actccgacgg	120
gagcaaattcc	gtgaaagatt	tattaaagtt	tctgaaagcg	cagactaaaa	ccgaagagtt	180
tgatgcgatc	aaaattgctc	tggttcgcc	agacatgatc	cgttc		225

<210> 85

<211> 225

<212> DNA

<213> Escherichia coli

<400> 85

ttgttgaaag	agattcgttc	gctgggtatc	aacatcgaac	tggaagacga	gtaattctcg	60
ctcaaacagg	tcactgctgt	cgggttaaaa	cccggcagcg	gattgtgcta	actccgacgg	120
gagcaaattcc	gtgaaagatt	tattaaagtt	tctgaaagcg	cagactaaaa	ccgaagagtt	180
tgatgcgatc	aaaattgctc	tggttcgcc	agacatgatc	cgttc		225

<210> 86

<211> 225

<212> DNA

<213> Escherichia coli

<400> 86

ttgttgaaag	agattcggtc	gctgggtatc	aacatcgaac	tggaagacga	gtaattctcg	60
ctcaaacagg	tcactgctgt	cggggtaaaa	cccggcagcg	gattgtgcta	actccgacgg	120
gagcaaatcc	gtgaaagatt	tattaaagtt	tctgaaagcg	cagactaaaa	ccgaagagtt	180
tgatgcgatc	aaaattgctc	tggtctcgcc	agacatgatc	cgttc		225

<210> 87

<211> 225

<212> DNA

<213> *Salmonella typhimurium*

<400> 87

ctgttgaaag	agatccgctc	gctgggcatc	aacatcgaac	tggaagacga	gtaattctcg	60
ctcaaacagg	tcactggtgt	cggggtaaaa	cccgaacacca	gattgtgcta	actccgacgg	120
gagcaaatcc	gtgaaagatt	tattaaagtt	tctgaaagcg	cagactaaaa	ccgaagagtt	180
tgatgcgatc	aaaattgctc	tggtctcgcc	agacatgatc	cgttc		225

<210> 88

<211> 225

<212> DNA

<213> *Enterobacter cloacae*

<400> 88

ctgttgaaag	agattcggtc	gctgggtatc	aacatcgaac	tggaagacga	gtaattctcg	60
ctcaaacagg	tcactggtgc	cggggttaacc	cccggcaccg	gattgtgcta	actccgacgg	120
gagcaaatcc	gtgaaagatt	tattaaagtt	tctgaaagcg	cagactaaaa	ccgaagagtt	180
tgatgcgatc	aaaattgctc	tggtctcgcc	agacatgatc	cgttc		225

<210> 89

<211> 225

<212> DNA

<213> *Citrobacter freundii*

<400> 89

ctgttgaaag	agattcggtc	gctgggtatc	aacatcgagc	tggaagacga	gtaactctcg	60
atcaaacagg	tcactggtgc	tggcgttaata	gccagcgcca	gattgtgcta	actccgacgg	120
gagcaaatcc	gtgaaagatt	tattaaagtt	tctgaaagcg	cagactaaaa	ccgaagagtt	180
tgatgcgatc	aaaattgcgc	tggcctcgcc	agacatgatc	cgttc		225

<210> 90

<211> 225

<212> DNA

<213> *Klebsiella oxytoca*

<400> 90

ttgttgaaag	agattcgctc	gctgggcatc	aacatcgaac	tggaagacga	gtaactctcg	60
ctcaaacagg	tcactggtgc	cggggtaaga	cccggcgcca	gattgtgcta	actccgacgg	120
gagcaaatcc	gtgaaagact	tattaaagtt	tctgaaagcg	caaactaaaa	ccgaagagtt	180
tgatgcgatc	aaaattgctc	tggtcatcgcc	agacatgatc	cgttc		225

<210> 91

<211> 267

<212> DNA

<213> *Serratia liquefaciens*

<400> 91

ctgttgaaag	aaatccgctc	gctcggtatc	aacatcgaac	tggaagacga	gtaatcgttt	60
ttccagctca	ggctcccggc	cttagggagc	ctgagggtgg	ttgttcaggt	cacacgggtg	120
cgcgatttgt	cagcgtgcac	ccaacaggtt	taactccgac	aggagccaat	ccgtgaaaga	180

cttattgaag tttctgaaag cgcaaactaa gaccgaagag tttgatgcga tcaagattgc 240
tctggcatcg ccagacatga tccgttc 267

<210> 92
<211> 267
<212> DNA
<213> *Serratia marcescens*

<400> 92
ctgttgaaag aaatccgctc gctcggcatc aacatcgaac tggaagacga gtaatcggtca 60
tgccggctca ggctccccgc ctaagggagc ctgagggtgg ttgttcagggt cacacgggta 120
cctactgcgg ttgtgggtac ccaacagggt taactccgac aggagccaat ccgtgaaaga 180
cttattgaag tttctgaaag cgcaaactaa gaccgaagag tttgatgcga tcaagattgc 240
tctggcctcg ccagacatga tccgttc 267

<210> 93
<211> 257
<212> DNA
<213> *Morganella morganii*

<400> 93
ttgctgaaag aaatccgttc cctcgggtatc aatatcgagc tggaagacga gtaattaccg 60
ttgtggctgc ccgtggtaca cgggcagcac cagtaaactt ggtttaaggg acaaacagac 120
gaccgtttgt ctcacagggt taactccgac aggagccatt tcgtgaaaga cttattaaag 180
tttctgaaag cgcaaaccac gaccgaagag tttgatgcga tcaaaattgg tctggcctca 240
cctgacatga ttcgttc 257

<210> 94
<211> 271
<212> DNA
<213> *Proteus mirabilis*

<400> 94
ttgttgaaag agatccgttc actgggtatc aacatcgaat tggaagacga ataacgtatt 60
ccatgaaagc agactgctaa atatggcagt ctgctaaaca gtgactacac tggtttaaaag 120
gggtgaatga caggggtcat ttgcctggca ggtctaactc cgacaggagc catttcgtga 180
aagacttatt aaagtttctg aaagcgcaaa ccaagaccga agagtttgat gcgatcaaaa 240
ttgctctggc atcacctgat atgatccgtt c 271

<210> 95
<211> 253
<212> DNA
<213> *VIBRIO CHOLERA*

<400> 95
ctgttgaaag agatccgctc gctgggtatc aacatcgagc tagaagacga ataataaacc 60
ctaagggttc cccgcaaggg gaagcctacc ggtttcggta ggaagggtgt cgttgccaat 120
cgcagcgagt tccttttaac tccttacagg agctgaatgt gaaagactta ttaaactttc 180
taaaagcaca gcataagacc gaagaatttg atgcgatcaa aatcgggtctg gcttcaccag 240
acatgatccg ttc 253

<210> 96
<211> 214
<212> DNA
<213> *Pseudomonas aeruginosa*

<400> 96
ctgatcaaag agatccgttc gctcggcatc gacatcgaac tggaaaccga ataacacgtg 60

acgctagacg	gtgcggtctg	tcaaggccgg	tgcaccggg	tccgtgagga	ggaaaggcct	120
tgaaagactt	gcttaatctg	ttgaaaaacc	agggtcaa	cgaagagttc	gatgccatcc	180
gtattggcct	ggcttcgccc	gagatgattc	gttc			214

<210> 97

<211> 214

<212> DNA

<213> *Pseudomonas aeruginosa*

<400> 97

ctgatcaaag	agatccgttc	gctcggcatc	gacatcgaac	tggaaccga	ataacacgtg	60
acgctagacg	gtgcggtctg	tcaaggccgg	tgcaccggg	tccgtgagga	ggaaaggcct	120
tgaaagactt	gcttaatctg	ttgaaaaacc	agggtcaa	cgaagagttc	gatgccatcc	180
gtattggcct	ggcttcgccc	gagatgattc	gttc			214

<210> 98

<211> 212

<212> DNA

<213> *Pseudomonas putida*

<400> 98

ttgatcaaag	agatccgttc	gctcggatc	gatatcgatc	tggaaccga	ataacacgtg	60
acgcgaagg	gagtggggca	ggtaatgctg	ctccctgctc	cgccaggagg	aaaggccttg	120
aaagacctac	tgattttgct	gaaaaaccag	ggtcaagtcg	aagagttcga	cgccatccgc	180
atcggctctg	cgtcgcctga	aatgatccgt	tc			212

<210> 99

<211> 228

<212> DNA

<213> *Shewanella violacea*

<400> 99

ttgttgaagg	aaatccgttc	actcgggtatt	aatatcgagt	tggtatcaaga	ctaaaattaa	60
cttaggttaa	tttggcaata	aattgggtgc	ctgcattagc	ggggcaccgc	gtttactcct	120
tcaggagaga	aacgtgaaag	acttattaaa	gtttctgaaa	cagcaaagca	agaccgaaga	180
atttaacggt	atcaagatcg	gactagcgtc	accagatctg	atccgctc		228

<210> 100

<211> 393

<212> DNA

<213> *Haemophilus influenzae*

<400> 100

attatgaaag	aaatccgctc	acttggttta	aatatcgagt	tagacgaaga	gtaatcactg	60
attactataa	atgggtgctga	tcccttggtc	ccaccggtt	acgggggagc	tggcgcgaag	120
actgaggggg	gatttatatc	ctaagcccc	ttccgccc	cgggcacctt	ccctcgcaaa	180
gcaggggaag	gcaagaggaa	caacaacata	agatttgaaa	tcgccgaagt	gcggtcaaaa	240
ttctccgaaa	tttttaaccg	cactttaaac	ctttaactcc	gacaggagaa	catttgatgaa	300
agacttagtt	aagtttttaa	aagcacaatc	aaaaaccagt	gaagattttg	atgtgatgaa	360
aattgggtta	gcttccccag	atatgatccg	ttc			393

<210> 101

<211> 262

<212> DNA

<213> *Pasteurella multocida*

<400> 101

attatgaaag	aaattcgctc	gcttggtatc	aatattgatt	tagatgaaga	ttaatctgac	60
atcataacca	agcttggtgt	aaagcaatgt	acgcgcaagt	gcggtaaaaa	ttttttaa	120
ttcagccgca	cttgaataag	tttaactccg	acaggagcaa	atctgtgaaa	gacttagtta	180
agttttttaa	agcacaatca	aaaacaagtg	aagattttga	tgtgatcaaa	attgggttag	240
cctcaccgga	catgatccgt	tc				262

<210> 102

<211> 306

<212> DNA

<213> *Neisseria meningitidis*

<400> 102

ttggtcaaag	agattcgctc	actgggcttg	gatatcgatt	tggaacgcta	ctgatacggg	60
tttcagacgg	cataagggga	gctgttctgc	aggtatgcgg	ggcagccgac	aatgttttaa	120
aacgaaatgc	cgtctgaaaa	cactgtacct	ctatccatat	cgaaaatccg	ccatgcggta	180
aaaatacttc	cttcaaggag	caaaaatgaa	tttggtgaac	ttattttaatc	cgttgcaaac	240
tgccggcatg	gaagaagagt	ttgatgccat	caaaatcggg	attgcctctc	ccgaaaccat	300
ccgctc						306

<210> 103

<211> 311

<212> DNA

<213> *Neisseria meningitidis*

<400> 103

ttggtcaaag	agattcgctc	actgggcttg	gatatcgatt	tggaacgtta	ctaaacaaaa	60
gttttcagac	ggcctttcag	ggtcgtctga	aaaagtgggt	tcagaataag	aatgaagcaa	120
tcggcattta	ggcgtctga	aatcaaaaagt	accgtttccc	aatatcgaaa	atccgccatg	180
cggtaaaaat	acttccttca	aggagcaaaa	atgaatttgt	tgaacttatt	taatccgttg	240
caaactgccg	gcatggaaga	agagtttgat	gccattaaaa	tcggtattgc	ctctcccgaa	300
accatccgct	c					311

<210> 104

<211> 226

<212> DNA

<213> *Buchnera sp*

<400> 104

ctttttaaag	aaattcggtc	attaggggatt	aatattgaac	tagaaagcga	ataacaaaat	60
tagcaatatt	ataaaaaatat	ttatgtatta	tttatttacc	ttaaaagttt	tactccaacg	120
agagctaacg	tgtgaaagat	ttactaaaat	ttctaaaatc	ccaaactaaa	aatgaagatt	180
ttgatgctat	taaaatctcg	ttagcttcac	ctgatatgat	cagatc		226

<210> 105

<211> 247

<212> DNA

<213> *Xylella fastidiosa*

<400> 105

ctcgtgaaag	aaatccgctc	cttagcaatt	aatattgagt	tggaagataa	ctaagatgcg	60
ttgttatgga	ttaattcatc	tgtttgagg	cccagagctc	cattgtcctc	tgtttccaac	120
tcgtcccgat	gcccgaattt	cggagaagaa	gtatgaaaga	tctactcaat	ctttttaatc	180
agcagcgcca	gacattggat	ttcgatgcca	tcaagattgg	ccttgccctg	cctgccttga	240
ttagatc						247

<210> 106

<211> 265

<212> DNA

<213> *Caulobacter crescentus*

<400> 106

ctggtcaagg	aaatgcgctc	gctcggcctg	aacgtcgagc	tggagaacag	ctgatctgga	60
tctccctcct	cgctgcccc	tcttaggaag	ggtggccggg	gaggggcctc	ctttcagccc	120
gctctccctc	aagaattttc	gcgggaaacc	ccgcagaagg	aaccaagatg	aaccaggaag	180
tcctgaacat	cttcaatccg	gtccaggccg	ctccgacctt	cgaccagatc	cgtatctcgc	240
tcgcctcgcc	ggaaaagatc	cgctc				265

<210> 107

<211> 325

<212> DNA

<213> *Mezorhizobium loti*

<400> 107

ctcgtcaagg	aaatgcgggc	tctcggcctc	aatgtcgagc	tggagaacac	caagctcgac	60
gacgcccctg	tccggtcgcc	cgacgcggcc	gagtaaaggc	tacagcgcg	cgcacgaagt	120
tgcggcgcg	aaaggaattc	gacggccggt	ggccgacaaa	agatggcggg	cgtttggccc	180
gcgactagat	gcaaggggtt	ttcgaggacc	ccgaaaagga	gaacggcatg	aaccaagagg	240
tcatgaatct	cttcaatccg	caggcgccctg	cgcagggtgtt	cgattccatc	cggatctcac	300
tggccagccc	tgagaagatt	ctgtc				325

<210> 108

<211> 311

<212> DNA

<213> *Rickettsia prowasekii*

<400> 108

atgataaaaag	aatttagatc	tttatgtctc	aacgtaaagc	ttgaagtaac	tccaagtaaa	60
taaagtgtat	atatgttgta	cataatttgt	cttggtgtat	aatttaaaaa	ttggttattgc	120
aagccaaact	aaatgaatgt	agtgagccat	aatgttattt	tgtatttaag	ctatggagta	180
acatttttaga	gtaggagtaa	tttttaggga	aaagtattta	tgagcgtagt	taatttttat	240
ggacaattaa	gtaatactca	acaatttgac	cagataagga	ttaatatagc	cagtcctgat	300
caggtacgtt	c					311

<210> 109

<211> 188

<212> DNA

<213> *Borrelia burgdorferi*

<400> 109

ctaatacaag	agcttagagg	gcttggactt	gatttgtcaa	tttatgatga	tgctgggaat	60
caggttcctt	tgacagaaaa	agaagaagaa	ttgattaata	aaagctaggt	ttttggagtt	120
tttatgaaag	agataaaaaga	ttttgaaaga	ataaaaatta	aaatagcgctc	tcccgatcaa	180
attagaaa						188

<210> 110

<211> 197

<212> DNA

<213> *Treponema pallidum*

<400> 110

ttggtgcagg	agctgcgggg	acttgcgctc	gactttacga	tttacgatgc	gaagggcaag	60
cagattccgc	tactgagcg	cgatgaagaa	atgacgaata	agattggctc	taaattttta	120
ggggtgcagg	gaatgaagga	tatccgggat	tttgacagtt	tacagataaa	gcttgcctcc	180
cctgatacca	ttcgggc					197

<210> 111
 <211> 159
 <212> DNA
 <213> *Campylobacter jejuni*

<400> 111
 ttaaccaatg agcttaaatac tcttgcttta gatgttgaga tttttgataa ggatgaagat 60
 aatgagtaaa tttaaagtaa tagaaattaa agaagatgca agacctagag attttgaagc 120
 atttcaacta agacttgcaa gtcctgaaaa aatcaaatac 159

<210> 112
 <211> 161
 <212> DNA
 <213> *Helicobacter pylori*

<400> 112
 ttgactaaaag aattgcaatc gctcgctttg gatattaata tttttgggga cgatgtggat 60
 gaggatggag cacctaaacc cattgtcatt aaagaagatg acaggcctaa agactttagc 120
 tctttccagc tcactctagc tagccctgaa aaaatccatt c 161

<210> 113
 <211> 161
 <212> DNA
 <213> *Helicobacter pylori*

<400> 113
 ttgactaaaag aattgcagtc gctcgctttg gatattaata tttttgggga cgatgtggat 60
 gaagatggag cgcctagacc cattatgatc aaagaagatg acaggcctaa agactttagc 120
 tctttccagc tcactctagc tagccctgaa aagatccatt c 161

<210> 114
 <211> 175
 <212> DNA
 <213> *Aquifex aeolicus*

<400> 114
 ctcgtaagag agctaaaggc tcttgggcta aacgttaagt gtctgaatgg tgaagagaag 60
 ccttgtgacg aggttgaagt taaagaggag gaagaaaaat gagtgaagca agaaggggta 120
 tcttcccctt ctcaaaaatt aaattgatgc tcgcttctcc cgaggatatc agaag 175

<210> 115
 <211> 175
 <212> DNA
 <213> *Aquifex pyrophilus*

<400> 115
 ctcgttaggg agctcaaagg tctcagcctt aacgttaagt gtatgaacgg tgaggagaag 60
 ccctgtgacc aagttgagat taaagaggag gaagaaaaat gagcacaaaa ggtaggggta 120
 tctttccttt ctcaaaaatt aagcttatgc tcgcttctcc cgacgatatc agaag 175

<210> 116
 <211> 293
 <212> DNA
 <213> *Deinococcus radiodurans*

<400> 116
 ctgggtcaagg aactccactc gctcgggtctg gacgtcgagg tgctcgacca cggcgacaag 60

gccgtggaca	tctttgaagg	gatgatgccc	aagcgctaag	gcgcctgcgg	cactgccaac	120
ccgtcgagca	ctgtcaaacc	gtctaaagg	caaaccgcca	acatctttca	gccgttcgac	180
ggtgagacag	ttcgacgggt	tgaccaacaa	aagagcctcc	attccacagg	agcctgaatg	240
aaagacttca	acaaagtccg	catcgccatc	gccagcccgg	agaagatccg	cga	293

<210> 117

<211> 177

<212> DNA

<213> *Thermus aquaticus*

<400> 117

ctggtgaagg	agcttcaggc	cctggccctg	gacgtgcaga	ccctggacga	gaaggacaac	60
cccgtggaca	tttttgaggg	cctggcctcc	aagaggtgag	cccttttctg	gaggaaagat	120
gaaaaaggaa	gtccgcaagg	tccgcatcgc	cctggcctcc	cccgagaaga	tccgctc	177

<210> 118

<211> 174

<212> DNA

<213> *Thermotoga maritima*

<400> 118

ctcatcaaag	aactcagagg	tctcgcgctc	gatgtgagac	tctacgatga	gaacggtaac	60
gagatagata	tcgacaagta	ctgattggga	ggttggtaga	atgccaatgt	cctctttcaa	120
gaggaagata	aaggcaattc	agataaagat	agcctctccg	gaagtgataa	gaag	174

<210> 119

<211> 324

<212> DNA

<213> *Streptomyces coelicolor*

<400> 119

ctcatcaagg	agatgcagtc	cctgtgcctc	aacgtggagg	tgctgtcctc	ggacggcatg	60
tccatcgaga	tgcgtagaac	cgacgaggac	gtcttccgcg	cagcggagga	gctcggcatc	120
gacctgtcgc	ggcgcgagcc	gagcagcgtc	gaagaggtct	gacgggagtc	aggcggggcc	180
tgtctccac	aggccccgcc	gatcccgcga	cccccgtttc	agaccacaga	cttacaaccc	240
tgagagggat	tgacgcatag	tgctcgacgt	caacttcttc	gacgagctcc	ggatcggtct	300
ggccaccgct	gacgacatcc	gtca				324

<210> 120

<211> 281

<212> DNA

<213> *Mycobacterium leprae*

<400> 120

ctgctcaagg	agttacagtc	gctgtgtctc	aacgtcgagg	tgctgtcgtc	cgacgggtgcg	60
gcgatcgagt	tgcgcggaagg	tgaggatgag	gacctcgagc	gggctgcggc	caacctcggt	120
atcaacttgt	cccgcacga	atcggcgtcc	atagaagatc	tggcttagcg	aacttggcat	180
tatcgctact	aaacccgcaa	ggggaaagg	agttacgtgc	tagacgtcaa	cttcttcgat	240
gaactccgca	ttggcctggc	taccgcggag	gacattcgtc	a		281

<210> 121

<211> 277

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 121

ctgctcaaag	aactgcagtc	gctgtgcctc	aacgtcgagg	tgctatcgag	tgacgggtgcg	60
gcgatcgaac	tgcgcggaagg	tgaggacgag	gacctggagc	gggccgcggc	caacctggga	120

atcaatctgt	cccgcaacga	atccgcaagt	gtcgaggatc	ttgctgtaaag	ctgtcgcaaa	180
attactaaac	ccgttagggg	aaagggagtt	acgtgctcga	cgtaacttc	ttcgatgaac	240
tccgcacg	tcttgctacc	gcggaggaca	tcaggca			277

<210> 122

<211> 277

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 122

ctgctcaaag	aactgcagtc	gctgtgcctc	aacgtcgagg	tgctatcgag	tgacggtgcg	60
gcgatcgaac	tgcgcggaagg	tgaggacgag	gacctggagc	gggcgcgggc	caacctggga	120
atcaatctgt	cccgcaacga	atccgcaagt	gtcgaggatc	ttgctgtaaag	ctgtcgcaaa	180
attactaaac	ccgttagggg	aaagggagtt	acgtgctcga	cgtaacttc	ttcgatgaac	240
tccgcacg	tcttgctacc	gcggaggaca	tcaggca			277

<210> 123

<211> 192

<212> DNA

<213> *Porphyromonas cangingivalis*

<400> 123

ctcctacacg	agctcaaagg	tcttggtcta	agcttctgta	tgagagtaata	ggcgaggata	60
tgtgattata	gttttttctt	catcagaata	aatctcccat	tatatagtta	tggcattcaa	120
aagagataca	aagataaagg	ccaacttcac	ccgtattaag	atcggtatcg	cttctcccga	180
agaggtattg	ga					192

<210> 124

<211> 257

<212> DNA

<213> *Mycoplasma genitalium*

<400> 124

ttgacaaaag	aattacaggg	cttggtctta	tctgtttcat	ttatctatga	tgacaacacc	60
caacaagact	ccaataatgt	ttccatcttg	caaagtgatg	gggaacaaga	tgaatttttc	120
aatgattttg	aatttgacac	tgaggggttat	tagaaattaa	caatgacaac	aacaagacgt	180
aataaaaagaa	ataacaagct	ttataaaaac	attaaagcaa	ttaaactttc	catcgcttcc	240
aatgacacca	ttttgaa					257

<210> 125

<211> 245

<212> DNA

<213> *Mycoplasma pneumoniae*

<400> 125

ttaacgaagg	aactacaagg	gttagcggtt	agtgtgtcct	ttattttacga	tgacaacacc	60
caacaagatt	ccaacaacgt	ttcaattctc	caagctgatg	gagaacagga	cgatctcttt	120
aatgactttg	aatttgacac	ggaggggttat	taattaatga	caaagcgtaa	taaaaagaac	180
aacaagctgt	acaagaacat	taaggcaatt	aagctttcga	ttgcttccaa	cgacacgatc	240
ctaaa						245

<210> 126

<211> 305

<212> DNA

<213> *Ureaplasma urealyticum*

<400> 126

ttaacaaaac	aaatgcaagg	tttaggggtta	tgtattaccg	ttgaaacaaa	agatgatcgt	60
------------	------------	-------------	------------	------------	------------	----

atggttagata	ttaatgaata	tacactaaat	caaaatcggt	taaataatga	cgatgatgag	120
gttatttttag	atgaaaatct	aaaagagatc	aatgattcta	atgaagaaat	atttaataca	180
aactttaata	ataatgacta	tgatgatgaa	gagaacttct	aaataataga	aaggtaaaat	240
aatatgagtc	aaaaagggat	taaatcatta	acgattttcca	ttgcttcacc	tgaacaaatt	300
ttaaa						305

<210> 127

<211> 244

<212> DNA

<213> Mycoplasma pulmonis

<400> 127

ttagcctatg	aattaagagg	gctaggaatc	aaacttcaaa	ttcatgaaaa	agaagaagaa	60
aaacaagaac	taccaagcca	agaatatgaa	agtttaaatac	ttgatcaaga	gctaaaaaca	120
gcttctgaaa	atgttagtga	aagtgagttt	taattatgcc	aaaaactaga	aaatattcaa	180
cagttgatga	agaaaagatt	ttaaaagtta	gcttatctct	tgcaactaaa	gaagatgttt	240
taga						244

<210> 128

<211> 202

<212> DNA

<213> Plasmodium falciparum

<400> 128

attttaaaag	agttacaaag	tttagctatt	aatatagaag	ctttttgtat	atttaaatgat	60
acaaataatt	tattagaaaa	tttacctatt	aatataattt	attaataatg	ataatacata	120
ataatataaa	ttttatagga	ttaaaattaa	atatattaaa	tcctaaacaa	ataataaaat	180
ggtcttcaat	attttataaa	aa				202

<210> 129

<211> 136

<212> DNA

<213> Archaeoglobus fulgidus

<400> 129

cttctggatg	agctgaagtc	aatgatgatc	gctccgagaa	taattctcgg	agataaggca	60
tgaggtgaaa	tgagatggta	ccgaagagga	tttcagccat	taaatttgag	gttctctccc	120
cccaagagat	aagaag					136

<210> 130

<211> 169

<212> DNA

<213> Methanothermobacter thermoautotrophicus

<400> 130

ttacttctcg	aactcaagag	tctctgtatc	ttcccgaaac	tcatactgga	agataaggca	60
tgataatgga	tttaagggaa	taacaaaaag	gagagaatac	cttgagagga	attttaaaga	120
aaatttccca	gataaaacttt	ggcctcatgt	cccccgagga	tatcaggaa		169

<210> 131

<211> 136

<212> DNA

<213> Halobacterium sp

<400> 131

ctactcgacg	agatgaaggc	gctcggcatc	gcgccgcgcc	tggaactgga	ggaggcagtg	60
taatgagtg	aggacaagcc	cccaaggaaa	tcggcgaaat	cagcttcggg	ctgatggacc	120
cagaggagta	ccgcga					136

<210> 132
 <211> 127
 <212> DNA
 <213> *Thermoplasma volcanium*

<400> 132
 atgagggatg agctgatatc tctcggtgtt gttatgcgtc ttatggtggg tgatatgaaa 60
 tgatgggaat ttctaaaaga atttcaagta ttaaatttgc gcttctttct ccagacgaga 120
 taagaaa 127

<210> 133
 <211> 127
 <212> DNA
 <213> *Thermoplasma acidophilum*

<400> 133
 atgagggatg agctgatctc tctcggtgtt gttatgaggt taatgctcgg tgatatgaaa 60
 tgatgggaat atcaaaaaga atttcatcaa taaaatttgc ccttctttct ccggatgaga 120
 taagaaa 127

<210> 134
 <211> 141
 <212> DNA
 <213> *Sulfolobus acidocaldarius*

<400> 134
 ttaattcaag aacttatgag tatggtaatt tcaccgagat taattttagg tgaaaaagta 60
 aacttaggag gtgcttcaaa tgagtgaagaa gattatacgg ggcgtaaaat ttggtgtatt 120
 atcacctaata gaaataaggc a 141

<210> 135
 <211> 145
 <212> DNA
 <213> *Sulfolobus solfataricus*

<400> 135
 ttaattcaag aactaatgag tatgattatc tcacctaggt tagttttgga ggataaagtt 60
 ggattaagtg gaggttaagg gaaatgagtg aaaagaatat aaaaggaata aagtttgga 120
 tactttctcc tgacgaaata agaaa 145

<210> 136
 <211> 134
 <212> DNA
 <213> *Pyrococcus abyssi*

<400> 136
 ctcttgatg agcttaaggc catggttatt aggccaaagt taaacctcac ggagaggggtg 60
 tgagctatgc aatccgttaa gaagggtatc ggtagtatag agtttggaat tctctcccct 120
 caagaaatta gaaa 134

<210> 137
 <211> 134
 <212> DNA
 <213> *Pyrococcus horikoshii*

<400> 137

cttctggatg agcttaaggc tatggtgatt agacctaagt taaacctcac ggagaggggtg 60
 tgagccatgc actcagttaa gaagggtata ggtagtattg aatttggaat actttcccct 120
 caagaaatta ggaa 134

<210> 138
 <211> 224
 <212> DNA
 <213> *Aeropyrum pernix*

<400> 138
 ctgctgcagg agataaccag tatgatgata aagccggaac tcaaggtagc cgacaagata 60
 tccgtcatca gaaaagtcgt cggcgactat acatgattac cccatttttaa ttctcggatt 120
 tcggggggtgt tgggtgctat gtctctaagg ctctcggagt tccgcgagac aaaccttcta 180
 gataagatac tctttggcgt ctttaagcccc catgagataa ggca 224

<210> 139
 <211> 26
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Primer

<220>
 <221> misc_feature
 <222> (6)..(7)
 <223> n = a, g, c or t/u

<220>
 <221> misc_feature
 <222> (9)
 <223> n = a, g, c or t/u

<220>
 <221> misc_feature
 <222> (12)
 <223> n = a, g, c or t/u

<220>
 <221> misc_feature
 <222> (18)
 <223> n = a, g, c or t/u

<220>
 <221> misc_feature
 <222> (21)
 <223> n = a, g, c or t/u

<220>
 <221> misc_feature
 <222> (24)
 <223> n = a, g, c or t/u<400> 139
 marccnntng gngaymgngt natngt 26

<210> 140
 <211> 186
 <212> DNA
 <213> *Pasteurella multocida*

<400> 140

gaaaaaattg atggcgaaga agtggttaatt atttctgaaa acgatatttt agccattggt	60
gaataatttt tatcaacaac acaaaatcgt tatttctata aataaacaaa cttaaaatag	120
caatttgcac aacaagattc gaaatgagag gaagataaaa aatggcagca aaagacgtaa	180
aatttg	186

<210> 141
 <211> 113
 <212> DNA
 <213> *Haemophilus influenzae*

<400> 141	
gaaaaaatcg atgggtgaaga agtggttaatc atttctgaaa acgacatcct agcaattgta	60
gaataattat taaataaggg aaaagaaaat ggcagcaaaa gacgtaaaat ttg	113

<210> 142
 <211> 113
 <212> DNA
 <213> *Haemophilus ducreyi*

<400> 142	
gaaaaaattg atggcgaaga aatttttaatt ctttcagaga atgacattct tgcaattgta	60
gaataatcga agaataaggg ataataaaat ggcaataaaa gacgttaaatt ttg	113

<210> 143
 <211> 137
 <212> DNA
 <213> *Buchnera aphidicola*

<400> 143	
gaaaaaattg ataacgaaga attattaatt ctaactgaaa gcgacatttt agcaattggt	60
gaatagtaaa ccacatgcta tatcattgaa aattgattta aggggatgac aaatggccgc	120
taaagatgta aaatttg	137

<210> 144
 <211> 139
 <212> DNA
 <213> *Myzus persica*

<400> 144	
gaaaaaatta atactgaaga gttattactt ttaactgaaa gtgacatttt agcaattggt	60
gaatagtaaa ctatatgcta tatccattta aaaatttatt taagggaatg tcaaatggcc	120
gctaaagatg taaaatttg	139

<210> 145
 <211> 144
 <212> DNA
 <213> *Vibrio cholerae*

<400> 145	
gaaaagatcg atggcaaaga agtgctgac ttggctgaac atgacatttt ggcaatcggt	60
gaataattga ttctgaatcc caacgaaatc aataactgaa tttagaaagg aaatgaaaaa	120
tggtgctaa agacgtacgt tttg	144

<210> 146
 <211> 137
 <212> DNA

<213> *Escherichia coli*

<400> 146

gagaagatcg acaatgaaga agtggtgatc atgtccgaaa gcgacattct ggcaattggt	60
gaagcgtaat cctcgcacga cactgaacat acgaatttaa ggaataaaga taatggcagc	120
taaagacgta aaattcg	137

<210> 147

<211> 137

<212> DNA

<213> *Escherichia coli*

<400> 147

gagaagatcg acaatgaaga agtggtgatc atgtccgaaa gcgacattct ggcaattggt	60
gaagcgtaat cctcgcacga cactgaacat acgaatttaa ggaataaaga taatggcagc	120
taaagacgta aaattcg	137

<210> 148

<211> 137

<212> DNA

<213> *Escherichia coli*

<400> 148

gagaagatcg acaatgaaga agtggtgatc atgtccgaaa gcgacattct ggcaattggt	60
gaagcgtaat ccgcgcacga cactgaacat acgaatttaa ggaataaaga taatggcagc	120
taaagacgta aaattcg	137

<210> 149

<211> 142

<212> DNA

<213> *Pseudomonas putida*

<400> 149

gtgaaagtcg atggcggaaga cctgctggta atggccgaga acgagattct cgccgttatt	60
gaaggctgat ttccccgact tcccgttatt ccaaagcatt tcaaggatta aacgatcatg	120
gctgctaaag acgtaaaatt cg	142

<210> 150

<211> 144

<212> DNA

<213> *Pseudomonas aeruginosa*

<400> 150

atcaaggtcg atggcgagga actgctggta atgggcgagt ccgaaatcct cgccgtcctg	60
gaagactgat cggtctcacc actccgtttt caccgaattc gatttagagg aaagagaaca	120
tggctgccaa agaagttaag ttcg	144

<210> 151

<211> 186

<212> DNA

<213> *Neisseria meningitidis*

<400> 151

gtaaaagccg acggcggaaga gctggttgta atgcgcgaag aagatatttt cggcattcgtt	60
gaaaaataaa tacggacacg atgccgtctg aaacggcaaa ccgccttcag acggcataaa	120
cggtttttatc agacagtttt aatgattttt ggagaattga aatggcagca aaagacgtac	180
aattcg	186

<210> 152
 <211> 186
 <212> DNA
 <213> *Neisseria meningitidis*

<400> 152
 gtaaaagccg acggcgaaga gctggttgta atgcgcgaag aagatatttt cggcacgtt 60
 gaaaaataaa tacggacacg atgccgtctg aaacggcaaa ccgccttcag acggcataaa 120
 cggttttatc agacagtttt aatgattttt ggagaattga aatggcagca aaagacgtac 180
 agttcg 186

<210> 153
 <211> 185
 <212> DNA
 <213> *Neisseria gonorrhoeae*

<400> 153
 gtaaaagccg acggcgaaga gctggttgta atgcgcgaag aagatatttt cggcacgtt 60
 gaaaaataaa tacggacacg atgccgtctg aaacggcaaa ccgccttcag acggcataaa 120
 cggttttatc agacagtttt aagatttttg gagaattgaa atggcagcaa aagacgtaca 180
 attcg 185

<210> 154
 <211> 201
 <212> DNA
 <213> *Xylella fastidiosa*

<400> 154
 tacaaggctg aaggcgctga atacaaagta ttacgcgagg acgacatcct ggcgatcatc 60
 ggttgattaa gccaagcccg aaactcgtga atgcatccga catatcacgc caacagcggg 120
 cacattgttc catacatcac taatgttctc atcgcgaaac ttggagtaaa aacataatgg 180
 ctgccaaga aattattttc a 201

<210> 155
 <211> 224
 <212> DNA
 <213> *Streptomyces coelicolor*

<400> 155
 gtgaagtaca acggcgagga gtacctcgtc ctctcgccc gcgacgtgct cgcgatcgtc 60
 gagaagtaga agtagtactt cgttcacccg aagcaccttg ctttcagct gcgcccctgg 120
 ctcccgcgac cataaaaagc cgggcgctcg gggcgagtt gccgtataac cccaagattt 180
 ccggaagagg gtcacgctc ccatggcgaa gatcctgaag ttcg 224

<210> 156
 <211> 185
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 156
 atcaagtaca acggcgagga atacctgac ctgtcggcac gcgacgtgct ggccgctggt 60
 tccaagtagt agagcgtgtt ccgccccggc gatccccgtg ctcaccacgg gtgatttccg 120
 gggcggcatg cgttagcgga ctagccctgc gtagaggagc ctgatgagca agctgatcga 180
 atacg 185

<210> 157
 <211> 185
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 157
 atcaagtaca acggcgagga atacctgata ctgtcggcac gcgacgtgct ggccgtcgtt 60
 tccaagtagt agagcgtgtt ccgccccggc gatccccgtg ctcaccacgg gtgatttccg 120
 gggcggcatg cgtttagcga ctagccctgc gtagaggagc ctgatgagca agctgatacga 180
 atacg 185

<210> 158
 <211> 169
 <212> DNA
 <213> *Mycobacterium leprae*

<400> 158
 atcaagtaca atggcgagga atacctgata ctgtcggcac gtgacgtgct ggctgtcgtt 60
 tccaagtaac gaaccgtgtt ccgccccggc gatccccgtg cttaccacgg ggtgatttcc 120
 gggcggcatg gcgtttaaag gagcctgatg agcaagctga ttgagtacg 169

<210> 159
 <211> 103
 <212> DNA
 <213> *Thermus aquaticus*

<400> 159
 attgagattg caccgcgaag gacgtacgtg atcctctccg agcgcgacct gcttgcggtc 60
 ctgcagtaaa ggaggtgaac catggcgaag atcctggtgt ttg 103

<210> 160
 <211> 100
 <212> DNA
 <213> *Thermus thermophilus*

<400> 160
 attgagattg acggcgagga gtacgtgata ctctccgagc gcgacctgct tgcggtcctg 60
 cagtaaagga ggtgaacctat ggccaagatc ctggtgtttg 100

<210> 161
 <211> 100
 <212> DNA
 <213> *Thermus thermophilus*

<400> 161
 attgagattg acggcgagga gtacgtgata ctctccgagc gcgacctgct tgcggtcctg 60
 cagtaaagga ggtgaactat ggccaagatc ctggtgtttg 100

<210> 162
 <211> 162
 <212> DNA
 <213> *Deinococcus radiodurans*

<400> 162
 gtcagcctcg aaggcaagaa ctacagcctg ctgagcgagc gcgacctgct cgccattgtc 60
 gagtaaggct ccgagtcagg ttctgagcct gtctgtttcc tgtttttctt cctcatttca 120
 cttttcaagg agcaatcaca atggctaaac agctcgtgtt tg 162

<210> 163
 <211> 121
 <212> DNA
 <213> Porphyromonas gingivalis

<400> 163
 atagagctgg agggcgaaaa atatatcatc atgcgcctaaa acgatgtctt ggcaatcatc 60
 taattctcag agacaataac ctacaataaa aaataaagac tatggcaaaa gaaatcaaat 120
 t 121

<210> 164
 <211> 134
 <212> DNA
 <213> Bacillus subtilis

<400> 164
 gtgaaatagc aaggtaactga atacttaatc ttacgtgaaa gcgacatttt agctgttatc 60
 ggctaattct taaataaaca atacttaaaa catttgagga ggtcttgtaa acatggcaaaa 120
 agaaattaag ttta 134

<210> 165
 <211> 180
 <212> DNA
 <213> Bacillus halodurans

<400> 165
 gtaaaatatg atggtaaaga gtatttaatc cttcgtgaaa gcgatattct cgcgattatc 60
 ggtaattttt acgtagggtt atccctacat acatgtaaga cgagagggtt ttgtctattc 120
 ctcttttgta aaataccatt caggagggtg agaataacat ggcaaaaagat attaagttaa 180

<210> 166
 <211> 121
 <212> DNA
 <213> Lactobacillus zeae

<400> 166
 gtgaagtatg aaggtaaga ctaccttgta ttgcatgaaa aagacatcat ggcaattgcg 60
 taactaaata atcgatcaat tttgagggtg ataaaaacaa tggcaaaaaga aattaaattc 120
 t 121

<210> 167
 <211> 142
 <212> DNA
 <213> Clostridium perfringens

<400> 167
 gttaagtctg agggggaaga atatactatt ttaagacaag acgatatact agcaatagtt 60
 gaatagtttt aaaatataag tgatttagat attcataata tatttgggag gtaaattaat 120
 atggctaaaa cattattatt cg 142

<210> 168
 <211> 120
 <212> DNA
 <213> Clostridium difficile

<400> 168
 gttaagatag aaggacaaga atacacaata ctaagacaga gtgatgtatt agctgttatt 60
 gaataaatat agaataaatt tattaggagg ggtttaaaat ggctaaagaa attaaatttt 120

<210> 169
 <211> 129
 <212> DNA
 <213> *Clostridium acetobutylicum*

<400> 169
 ataaaagttg acaatgaaga attgttaatt ttaagacagg acgatatttt aggaattgta 60
 gaagaataag ctatcaattt tgtaataat tcagggaggg attctaaatg gcaaagcaaa 120
 tattatacg 129

<210> 170
 <211> 141
 <212> DNA
 <213> *Lactobacillus helveticus*

<400> 170
 gttgaatagc aaggtgaaaa gtacttagtc cttcatgaaa aagacatttt agcaattgca 60
 aaataattga cgcaattatt agaaattaaa atacgagatt aaggaggcat agataatcta 120
 tggcaaaaga tattaaattc t 141

<210> 171
 <211> 118
 <212> DNA
 <213> *Lactobacillus johnsonii*

<400> 171
 ttgaagtacg aaggcgaaaa gtacttagtt cttcgtgaaa gcgacttatt agctgtcggt 60
 aagtaataaa atttgaaata aaagggtggca tataatatgg ctaaagagat taaatttt 118

<210> 172
 <211> 143
 <212> DNA
 <213> *Staphylococcus epidermis*

<400> 172
 gtaaaacgtg gcgcccacac atatctaatt ttaaataag aagatatatt agctattata 60
 gaataaagag cgaattttta atattaatta aatgatttaa taagtggagg ttgttttagac 120
 tatggcaaaa gatcttaaat tct 143

<210> 173
 <211> 163
 <212> DNA
 <213> *Staphylococcus aureus*

<400> 173
 gttaaacgag ataataaac atatctagta ttaaataag aagatatatt agcggtaatt 60
 gaataatata aaattaaatt catagataaa ttgtaaagaa cgaaaatgaa atatgactaa 120
 acaaatggag gtttatcatt tatgggttaa caattgaaat tct 163

<210> 174
 <211> 106
 <212> DNA
 <213> *Streptococcus pneumoniae*

<400> 174
 gtcaaagatg gcgatgaaaa gtacatcatc gtaggcgaag ctaacatttt ggcaatcatt 60
 gaggaataga aggagaaagt aagtatgtca aaagaaatta aatttt 106

<210> 175
 <211> 175
 <212> DNA
 <213> *Lactococcus lactis*

<400> 175
 gtaaaaaatgg atggtgaaga attcttgatt ctcaaagatt cagaccttct tgcaattgta 60
 gagtaaaatt ataaaagcaa tcattttttt ggttgctctt tgtctatctt aaaatctata 120
 aaattaaaaa tatattctta aaaaggagct aaaatgtcaa aagatattaa atttt 175

<210> 176
 <211> 111
 <212> DNA
 <213> *Rickettsia prowasekii*

<400> 176
 attgaaataa aaggagaaaa attaatcggt atgaaagaaa gcgatgtatt tggattatt 60
 aattaattat ttttaggaga aaaaatatga caacgaaact tattaacac g 111

<210> 177
 <211> 129
 <212> DNA
 <213> *Chlamydia muridarum*

<400> 177
 ctcactgtcg aaggtgaaga atatgtcatc gttcaaata gcaagttat agcagtcctg 60
 caataaaaac taagagagtg aagtaagatt taaggagcgc atcgatggtc gctaaaaata 120
 ttaaataata 129

<210> 178
 <211> 128
 <212> DNA
 <213> *Chlamydia trachomatis*

<400> 178
 cttactgtcg aaggtgaaga gtacgtcatc gttcaaata gcaagttat cgcagttctg 60
 caataaaaac taagagagtg aagaagattt aaggagcgc tcaatggctg ctaaaaacat 120
 taaataca 128

<210> 179
 <211> 132
 <212> DNA
 <213> *Chlamydophila pneumoniae*

<400> 179
 atcacatcg atgacgaaga gtatgtcatt ctacagtcca gtgaaatcat ggccgtccta 60
 aaataaaata ctagtttgca gattatagaa agttaaggag aacaacgatg gcagcgaaaa 120
 atattaaata ta 132

<210> 180
 <211> 132
 <212> DNA
 <213> *Chlamydophila pneumoniae*

<400> 180
 atcacatcg atgacgaaga gtatgtcatt ctacagtcca gtgaaatcat ggccgtccta 60
 aaataaaata ctagtttgca gattatagaa agttaaggag aacaacgatg gcagcgaaaa 120

atattaaata ta 132

<210> 181
 <211> 132
 <212> DNA
 <213> Chlamydophila pneumoniae

<400> 181
 atcacaatcg atgacgaaga gtatgtcatt ctacagtcca gtgaaatcat ggccgctccta 60
 aaataaaata ctagtgtgca gattatagaa agttaaggag aacaacgatg gcagcgaaaa 120
 atattaaata ta 132

<210> 182
 <211> 141
 <212> DNA
 <213> Chlamydophila caviae

<400> 182
 cttaccgttg atgggtgagga gtacgtcatt gttcaggaaa gcgaagttat ggcagttctc 60
 aagtaagaga aatcattatt tatagattgc aaaaagttaa ggagcacaaa aaaacaatgg 120
 cagcaaaaaa tattaaatat a 141

<210> 183
 <211> 160
 <212> DNA
 <213> Helicobacter pylori

<400> 183
 ctagaagaca ttctagggcat tgtgggctca ggctcttggt gtcatacagg taatcatgac 60
 cataaacatg ctaaagagca tgaagcttgc tgtcatgatc acaaaaaaca ctaaaaacat 120
 tattattaag gatacaaaat ggcaaaaagaa atcaaatttt 160

<210> 184
 <211> 160
 <212> DNA
 <213> Helicobacter pylori

<400> 184
 ctagaagaca ttctaggtat tgtgggctca ggctcttgct gtcatacagg taatcatgac 60
 cataaacatg ctaaagagca tgaagcttgc tgtcatgatc acaaaaaaca ctaaaaacat 120
 tattattaag gatacaaaat ggcaaaaagaa atcaaatttt 160

<210> 185
 <211> 72
 <212> DNA
 <213> Campylobacter jejuni

<400> 185
 ttagatgata tcttaggaat tttaaaataa tttataaaaa aggataaaaa atggcaaaaag 60
 aaattatttt tt 72

<210> 186
 <211> 136
 <212> DNA
 <213> Clostridium thermocellum

<400> 186
 gtaaaatttg acggacagga atatacgatc ttaagacaaa acgatatttt ggcggttagta 60
 gagtaattat attaccaact tcaatacaaaa aagtatccta aggagggttaa tcatatggca 120

aagcaaataa aatttg

136

<210> 187

<211> 127

<212> DNA

<213> Mycoplasma genitalium

<400> 187

tttgagaatg agggaaacaa gtacaaaatt attggatttg aggatgtact tgcctttgaa	60
aaaccagaaa gtggtaagca aagaaaaaga taaaattaaa caattatggc aaaggaatta	120
atctttg	127

<210> 188

<211> 138

<212> DNA

<213> Mycoplasma pneumoniae

<400> 188

tttgaagagg aaggtaacaa gtacaagatt atttccttgg aagatgtcct tgcttttgaa	60
aagcatggta atacaaaaac tactactgta aagaaaggag ctaagaaaaa atagttatgg	120
caaaggaatt agtatttg	138

<210> 189

<211> 120

<212> DNA

<213> Aquifex aeolicus

<400> 189

gtagagattg aaggaaagat ttacctcggt atgtctgaag acgaagtttt agctgttggt	60
gaagattatt caagcttaat aggaggtgag gtgagatggc agcaaaggca attatctaca	120